

AMENDMENTS TO THE CLAIMS

Claims 1-60 (canceled)

61. (previously presented) An isolated nucleic acid comprising (a) the nucleotide sequence of SEQ ID NO: 1; (b) a nucleotide sequence having at least 95% identity to SEQ ID NO: 1; (c) a nucleotide sequence that hybridizes under stringent conditions to the complementary strand of a polynucleotide having SEQ ID NO: 1; (d) a nucleotide sequence encoding a polypeptide comprising an amino acid sequence having at least 95% identity to the amino acid sequence set forth in SEQ ID NO: 2, wherein said polypeptide is capable of reducing crotonyl-CoA or crotonyl-ACP; (e) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 2 with 0 to 10 conservative amino acid substitutions, wherein said polypeptide is capable of reducing crotonyl-CoA or crotonyl-ACP; (f) a nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2; or (g) the complement of the nucleotide sequence of (a), (b), (c), (d), (e) or (f).

62. (previously presented) The isolated nucleic acid molecule of claim 61, further comprising a transcriptional regulatory sequence operably linked to said nucleic acid sequence.

63. (previously presented) The isolated nucleic acid molecule of claim 61, wherein said polypeptide is fused to a heterologous amino acid sequence.

63. (previously presented) A vector comprising the isolated nucleic acid of claim 61.

64. (previously presented) A host cell comprising the vector of claim 63.

65. (previously presented) The host cell of claim 64, wherein said host cell is prokaryotic or eukaryotic.

66. (previously presented) The host cell of claim 65, wherein said prokaryotic cell is a bacterial cell.

67. (previously presented) The host cell of claim 65, wherein said eukaryotic cell is a mammalian cell.